

# NUMERICAL DUPLICATION AND ITS ASSOCIATED GRADED RING

FRANCESCO STRAZZANTI

Given a numerical semigroup  $S$ , an its proper ideal  $E$  and an odd integer  $b \in S$ , the numerical duplication  $S \bowtie^b E = 2 \cdot S \cup \{2 \cdot E + b\}$  is a new numerical semigroup which arises in commutative algebra. We will give a brief survey on the motivations and known results and, then, we will present some new results about its associated graded ring.

This is a joint work with Marco D'Anna and Raheleh Jafari.

